BASIC INFORMATION

DESCRIPTION

A break in a bone usually caused by a fall. Following are the different types of fractures:

- Complete fracture. The broken bone is completely separated.
- Incomplete (greenstick) fracture. The broken bone is not completely separated.
- Comminuted fracture. There are more than 2 bone fragments at the fracture site.
- Open fracture (compound). The fractured bone has broken the skin.
- Closed fracture (including stress fracture). The fractured bone has not broken the skin.
- Compression fracture. The break occurs from extreme pressure on the bone.
- Impacted fracture. The broken ends have been driven into each other.
- Avulsion fracture. Force has been applied to a strong tendon, causing it to pull on and break off a portion of bone.
- Pathologic fracture. A break that occurs from minor injury in bone weakened or destroyed by disease.
- Stress fracture. A crack in a bone caused by repetitive and prolonged pressure on the bone, usually by intense exercise.

FREQUENT SIGNS AND SYMPTOMS

- Pain and swelling at the fracture site.
- Tenderness close to the fracture.
- Paleness and deformity (sometimes).
- Loss of pulse below the fracture, usually in an extremity (this is an emergency).
- Numbness, tingling or paralysis below the fracture (rare; this is an emergency).
- Bleeding or bruising at the site.
- Weakness and inability to bear weight.

CAUSES

Injury.

RISK INCREASES WITH

- Osteoporosis.
- Tumors of the bone or bone marrow.
- Activities that carry the risk of injury.
- Reckless behavior that increases the chance of accident.
- Older adults (they tend to fall more and bones are fragile).

PREVENTIVE MEASURES

- Don't drink alcohol or use mind-altering drugs and drive.
- Wear protective gear for sports.
- Use your auto seat belt.
- If you have osteoporosis, adhere to your treatment program, and avoid situations in which injury is likely.
- Maintain a safe home environment (no slippery rugs, slick floors, loose railings, provide mats in bath tubs, etc.).

EXPECTED OUTCOMES

- Usually curable with skillful first aid and aftercare. The broken bone should be manipulated, realigned and immobilized as soon as possible. Realignment is much more difficult after 6 hours.
- Healing time varies. Recovery is complete when there is no bone motion at the fracture site, and X-rays show complete healing.

POSSIBLE COMPLICATIONS

- Failure to heal (non-union).
- Shock from blood loss.
- Travel of a fat embolus (clump of fat cells) from the injury site to the lungs or brain.
- Obstruction of nearby arteries.

TREATMENT

GENERAL MEASURES

- First aid treatment for bleeding, cover any open wounds, move patient as little as possible. Then transport to hospital or other emergency facility.
- X-rays of the affected area.
- Bone ends that have been displaced are maneuvered back into place (reduction).
- Most fractures require immobilization with casts or splints.
- Hospitalization for anesthesia and treatment of severe fractures.
- Surgery, if the fracture must be repaired with rods, plates or screws.
- Physical therapy for rehabilitation.

MEDICATIONS

Pain relievers and muscle relaxants, if needed.

ACTIVITY

- Immobility of a bone for a long period can cause loss of muscle bulk, stiffness in nearby joints, and edema (accumulation of fluid in the tissues). It is important to begin to use the affected part as soon as is safely possible.
- There may be physical therapy with special exercises to maintain flexibility of the joint and provide strength to the muscles.
- Resume normal activities as soon as symptoms improve.

DIET

No special diet. Take vitamin-C and zinc supplements to promote bone healing.

NOTIFY OUR OFFICE IF

- You have symptoms of a bone fracture.
- The following occur after immobilization or surgery:
  Swelling above or below the fracture site.
  Severe, persistent pain.
  Blue or gray skin below fracture site, especially under nails, or numbness or loss of feeling below the fracture site.

Report any of the above signs immediately!